CLAIMS

N-phenyl-2-pyrimidine-amine derivative represented by the following formula (1):

$$R_3$$
 N
 N
 R_4
 R_5
 R_6
 R_6
 R_6
 R_1
 R_1
 R_2
 R_3
 R_4
 R_5
 R_6
 R_6

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and its salt, in which

R₁ represents 3-pyridyl or 4-pyridyl,

R₂ and R₃ each represent hydrogen or lower alkyl,

R₆ or R₇ represents a radical having the following formula (2):

$$-\underline{N} \xrightarrow{O} -\underline{C} - (X)_{n} - R_{s}$$
(2)

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wherein X represents oxygen or NH, n=0 or 1, and R₉ represents aliphatic having 5 to 10 carbon atoms, or represents 5 to 7 membered saturated or unsaturated monocyclic radical, or bi- or tri-cyclic radical optionally combined with benzene ring, each of which has 1 to 3 hetero atoms selected from a group consisting of nitrogen, oxygen and sulfur, or represents piperazinyl or homopiperazinyl each of which is substituted by lower alkyl, and

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 R_4 , R_5 , R_7 , and R_8 each represent hydrogen, or one or two thereof each represent halogen, lower alkyl, or lower alkoxy when R_6 represents the radical of the above formula (2), or one or two of R_4 , R_5 , R_6 , and R_8 each represent halogen, lower alkyl, or lower alkoxy when R_7 represents the radical of the above formula (2), provided that R_6 or R_7 represents a radical of formula (2) wherein n=0 and R_9 is 4-methylpiperazine, then one or more of R_4 , R_5 , R_7 , and R_8 , or one or more of R_4 , R_5 , R_6 , and R_8 are halogen.

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2. The compound of claim 1 wherein R₁ represents 3-pyridyl,

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R₂ and R₃ each represent hydrogen,

 R_6 or R_7 represents a radical having the following formula (2):

$$-\underline{\mathbf{H}} = \mathbf{C} - (\mathbf{X}) - \mathbf{R}_{9}$$

wherein X represents NH, n=0 or 1, and R₉ represents piperidine, 4-methylhomopiperazine, or 4-methylpiperazine, and

 R_4 , R_5 , R_7 , and R_8 each represent hydrogen, or one or two thereof each represent fluoro, methyl, or methoxy when R_6 represents the radical of the above formula (2), or one or two of R_4 , R_5 , R_6 , and R_8 each represent fluoro, methyl, or methoxy when R_7 represents the radical of the above formula (2).

- 3. The compound of claim 1 wherein R₁ represents 3-pyridyl, R₂, R₃, R₄, R₅, R₇, and R₈ each represent hydrogen, and R₆ represents the radical of formula (2) wherein n=0 and R₉ represents 4-methylhomopiperazine, or n=1, X represents NH, and R₉ represents 4-methylpiperazine.
- 4. The compound of claim 1 wherein R₁ represents 3-pyridyl, R₂ and R₃ each represent hydrogen, R₄ represents methyl, R₅, R₆ and R₈ each represent hydrogen, and R₇ represents the radical of formula (2) wherein n=1, X represents NH, and R₉ represents 4-methylpiperazine.
- 5. A process for preparing the compound of formula (1) as defined in claim 1, which comprises reacting a compound represented by the following formula (3a) or (3b):

$$\begin{array}{c|c} R_3 & & & \\ \hline R_2 & & & \\ \hline R_1 & & & \\ \hline R_5 & & & \\ \end{array}$$

$$R_3$$
 N
 R_4
 R_5
 R_6
 R_6
 R_6
 R_6
 R_6
 R_7
 R_8
 R_8
 R_8
 R_8
 R_8
 R_8
 R_8
 R_8
 R_8

wherein R_1 to R_8 are as defined in claim 1, with a compound represented by the following formula (4):

(3a)

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wherein L represents a leaving group, to produce a compound represented by the following formula (5a) or (5b):

$$R_3$$
 R_2
 R_4
 R_5
 R_7
 R_8
 R_9
 R_9

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wherein R_1 to R_8 and L are as defined above, and reacting the compound of formula (5a) or (5b) with a compound represented by the following formula (6):

$$H(X)_{n} - R_{9}$$
 (6)

wherein X, n, and R_9 are as defined in claim 1, to give a compound represented by the following formula (1a) or (1b):

$$R_3$$
 R_4
 R_5
 R_7
 R_7
 R_8
 R_9
 R_9

wherein R_1 to R_8 , X, n, and R_9 are as defined above.

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- 6. A pharmaceutical composition for the treatment of lung cancer, gastric cancer, colon cancer, pancreatic cancer, hepatoma, prostatic cancer, breast cancer, chronic or acute leukemia, hematologic malignancy, encephalophyma, bladder cancer, rectal cancer, or cervical cancer, which comprises an effective amount of the compound of formula (1) or its salt as defined in claim 1 as an active ingredient together with pharmaceutically acceptable inert carriers.
- 15 7. The composition of claim 6 which is used as an oral preparation.
 - 8. The composition of claim 6 which is used as an injection.
- 9. A method of treating lung cancer, gastric cancer, colon cancer, pancreatic cancer, hepatoma, prostatic cancer, breast cancer, chronic or acute leukemia, hematologic malignancy, encephalophyma, bladder cancer, rectal cancer, or cervical cancer,

which comprises having a host in need of such treatment ingest an amount of the compound of formula (1) or its salt as defined in claim 1 effective to provide such treatment.